REPORT

OF THE

Indian Tariff Board

ON THE

PRESERVED FRUITS INDUSTRY

PERSONNEL OF THE BOARD

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REPORT ON THE PRESERVED FRUITS INDUSTRY

Reference to the Board.

1. The application of the Preserved Fruits Industry for grant of protection or assistance was referred to the Tariff Board by the Government of India, Department of Commerce, in their Resolution No. 218-T (55)/45, dated the 16th February 1946 (Appendix II) read with paragraphs 2, 3 and 7 of the Commerce Department Resolution No. 218-T(55)/45, dated the 3rd November 1945 (Appendix I).

Application for protection.

2. (*A*) The application for assistance or protection to the preserved fruits industry was submitted by the Indian Fruit Preservers' Association on the 30th November 1945. This Association was formed in 1941 and has on its membership roll at the present time as many as 186 fruit canning firms scattered all over the country. The claim for assistance or protection as set forth in the application is based on the following grounds :—

(i) Though fruit preservation in the form of chutney and murabbas has been carried on in India from times immemorial, the fruit preservation industry in the modern sense is only of recent origin in the country.

(ii) The industry is essential to the progress of the country's horticultural industry, because it utilises the seasonal surplus and takes care of the seasonal glut of fruits and vegetables and thus helps to avoid wastage.

(iii) India possesses all the natural advantages for the development of this industry, *viz.*, a plentiful supply of a large variety of fruits, sugar, tin and glass containers and other packing materials, coal, cheap labour, and an extensive and growing home market. There is a possibility of establishing an export market in the neighbouring countries like Ceylon, Persia, Egypt, Iran, etc.

(iv) The industry cannot hope to compete on terms of equality with the imported products, because the producers in foreign countries have got many special advantages such as large-scale production, up-to-date machinery, advanced technique, long experience, and what is more important, special concessions in regard to prices of sugar and containers and sometimes in respect of freights.

(v) Besides, the industry in India has been suffering from two sets of special handicaps :

(1) Wartime difficulties such as (*a*) insufficient supply of sugar, (*b*) insufficient supply of containers, and (*c*) restricted transport facilities.

(2) Basic handicaps such as (*a*) excessive cost of sugar, (*b*) inferior quality and high cost of containers, (*c*) high freight rates and (*d*) dearth of technical experts.

(*B*) In order to be able to counterbalance the special advantages and facilities enjoyed by foreign producers, the industry has asked for assistance or protection in the following forms :—

(i) Sugar to be supplied to the industry at or around 1 anna per lb.

(ii) Excise duty on sugar and salt used in the industry to be refunded.

(iii) Sanitary cans or tinplate for cans to be imported free of duty.

(iv) Import of bottles free of duty.

(v) Chemicals, packing materials and such other items as are commonly required by the industry to be allowed to be imported free of duty.

(vi) Machinery required by the industry to be allowed to be imported free of duty.

(vii) Reduction of railway freight on fresh fruits and processed fruits by at least 50 per cent.

(viii) A protective duty of 200 per cent. to be levied on all imported canned, bottled or cartoned fruits and vegetable products, or, alternatively, a subsidy of 4 annas per lb. on all food products produced and sold in the country to be given. If the number of factories in respect of each group of products is limited by Government, subsidies may be slightly less. Subsidy may be given for five years in respect of sales in the internal market and for 10 years in respect of sales in the export market. In case a subsidy is given, a ceiling price to be fixed for all food products, which, for the first three years should be 20 per cent. higher, and thereafter 10 per cent. higher than the wholesale price of corresponding products in America or Australia.

Method of inquiry.

3. The standard questionnaire for producers was sent to the principal firms engaged in the industry. A list of such firms will be found in Appendix III. The names of consumers and importers to whom separate questionnaires were issued will be found in Appendix IV and Appendix V, respectively. All Provincial Governments and Administrations, as also the Government of Jammu and Kashmir, were addressed to give their views on the present position and future prospects of the fruit preservation industry in their respective areas. Sardar Bahadur Lal Singh, Fruit Development Adviser to the Government of India, and Dr. Girdhari Lal, Bio-chemist, Indian Institute of Fruit Technology, Lyallpur, were also requested to furnish the Board with information regarding the problems and prospects of the industry. A list of the factories visited by or on behalf of the Board will be found in Appendix VI. Oral evidence of representatives of producers, consumers and fruit growers of Jammu and Kashmir State was taken at Srinagar on the 3rd October 1946, while the general inquiry at which all interests were represented was held at Lahore on the 11th and 12th October 1946. The Development Minister, the Director of Agriculture, and the Assistant Director of Industries, Government of Jammu and Kashmir, and the representatives of the Fruit Growers' Association, Kashmir, attended the public inquiry at Srinagar by special invitation. The lists of witnesses who were examined at Srinagar and Lahore will be found in Appendix VII and Appendix VIII, respectively.

Present condition of the industry.

4. As has been stated already, the fruit preservation industry in the modern sense is only of recent origin in the country. A few firms in Bengal, Bombay, Madras and the Punjab were engaged in this industry in the prewar period. But it was the heavy reduction of imports during the war, coupled with increased demand for preserved fruits in various forms on the part of the defence services and civilian population, which gave a stimulus to the industry, and in consequence canning factories came to be established all over the country. Some idea of the present

stature of the industry can be had from the fact that the Indian Fruit Preservers' Association has on its roll at the present time as many as 186 licensed factories including the leading ones, while we are told that some 600 more applications for licences under the Food Products Control Order are pending with the Fruit Development Adviser. The Association has also submitted a rough estimate of the present production of the industry which is as follows :—

(i) Squashes, juices, cordials, etc.—1·75 crores of qrt. bottles, valued at about Rs. 2·6 crores.

(ii) Jams, jellies, marmalades, canned and bottled fruits, etc.—24 crores of lbs., valued at about one crore of rupees.

(iii) Tomato juice, ketchup, chutneys and vinegar—65 lakhs of lbs., valued at about Rs. 48 lakhs.

(iv) Pickles—7 crores of lbs., valued at about Rs. 1·5 crores.

(v) Candied and crystallised fruits—30 lakhs of lbs., valued at about Rs. 22·5 lakhs.

(vi) Indian murabbas not less than 25 crores of lbs., valued at about Rs. 12 crores.

[*Note.*—Sardar Bahadur Lal Singh considers that this estimate is rather excessive, and specially so under item (vi).)]

Of these various items Nos. (iv) pickles and (vi) murabbas form a well established industry and are not apprehensive of any competition from imports. Items (i) squashes, juices, cordials, etc., (ii) Jams, jellies, marmalades, canned and bottled fruits, etc., (iii) tomato juice, and (v) candied and crystallised fruits, are the categories of preserved fruits which are faced with severe competition from abroad and which are stated to be in need of protection or assistance.

5. The value of the estimated production in respect of these four items, as given by the Association, comes to about Rs. 4 crores, but, in the opinion of the Board, and judging from the prewar import figures, this appears to be an overestimate. We were told that, due to the inadequate supply of sugar and certain other difficulties, the full capacity was not being utilised, the actual production at the present time being about 50 per cent. of the capacity.

6. Though the industry has developed extensively in recent years, it has yet to consolidate its position. Most of the machinery at present employed is rather inefficient, the greater part of it being improvised and fabricated in the country. Some of the processes such as peeling and coring of fruits and filling of cans are still being done by hand though the introduction of machinery would ensure the handling of the materials in a more hygienic manner and also considerably reduce the cost through savings in labour charges. The labour employed in most factories is untrained and is employed seasonally so that there is no certainty that the same batch of labourers is being employed year after year. Besides, the great majority of the factories have so far failed to secure the services of competent experts in fruit preservation.

7. One of the greatest handicaps from which the industry suffers at present is the absence of a well developed system of marketing of fresh fruits. There is no system of classification and grading. Besides, in some places (e.g., Srinagar), there are no organised markets for fruits. Moreover, cold storage facilities for the preservation of fresh fruits are lacking in most places.

Absence of marketing and grading facilities for fresh fruits.

8. Then again, there do not appear to be sufficient research facilities on fruit canning in the country. No doubt, under special schemes approved and financed by the Imperial Council of Agricultural Research and carried out in co-operation with the Provincial Governments, a certain amount of research work on fruit preservation was being done both at Lyallpur and at Quetta for the last several years, and the progress in fruit preservation, especially in squash manufacture in the Punjab, is the direct result of the activities of Lyallpur laboratories. But the Indian Institute of Fruit Technology as such came into existence only in April 1945, which at present is functioning in the laboratories at Lyallpur where work was being done previously under the Imperial Council of Agricultural Research. It is understood that the Institute is likely to be shifted to Delhi in 1947 and expanded there greatly. Besides research, the Institute is called upon to analyse the products of the different factories and often to give technical advice on the various problems of fruit preservation that arise in different factories. It also offers a diploma course of one year's duration in fruit preservation.

The Indian Institute of Fruit Technology.

9. In order to ensure that the fruit products manufactured in India conform to certain minimum standards regarding composition, handling and hygienic conditions, a Fruit Products Control Order was promulgated in the current year by the Government of India, Department of Agriculture, in consultation with the Indian Fruit Preservers' Association. Under this Order, all fruit preservation factories are required to take out a licence, to submit quarterly returns of their output of different products, and to pay a cess at the rate of 4 annas per Rs. 100 worth of products sold. It is expected that the enforcement of this Order will lead to a gradual and systematic improvement in the conditions of the industry and also help in the regular collection of statistics regarding production.

Fruit Products Control Order.

10. In any scheme of all round economic development of India for the purpose of improving the living standards of the masses of people, the development of fruit farming, among other things, must take an important place. In order to establish the fruit farming industry on a stable basis, it is essential that the fruit preservation industry also must be simultaneously developed. In the absence of a fruit preservation industry a good part of the fresh fruit generally runs to waste. The function of the fruit preservation industry in relation to the fruit growing industry is to take care of the surplus fruit in seasons of plenty and to utilise for certain bye-products the unsaleable fruit (though sound and healthy) which would otherwise go to waste. The development of the fruit preservation industry is also of importance to the future progress of other industries, such as glass and tin containers, and more particularly the sugar industry. The increased consumption of preserved fruits

Importance of industry.

in different forms will give a stimulus to the expansion of the sugar industry. It will thus be seen that the fruit preservation industry has an important bearing on the fruit growing industry and that it will be helpful in expanding the basis of the valuable sugar industry.

Raw materials.

11. Fresh fruits, sugar, containers like glass bottles and tin cans and chemical preservatives are the principal raw materials required for this industry. They are all available in the country. There is, however, much room for improvement in the quality of fruits, bottles, and cans. Fruits required for canning should be of standard varieties and sizes and of the right degree of maturity. It will, therefore, be necessary to raise the quality of fruits by an improved system of horticulture and to modernize the marketing of fruits by the adoption of classification and grading, cold storage facilities, better and quicker transport, and regulated markets. So far as sanitary cans are concerned, they are at present being largely supplied by the Metal Box Company, Calcutta, but the cans are said to be expensive and inferior in quality as compared with American cans. This Company submitted a full memorandum on the subject of supply of sanitary cans to the preserved fruits industry, and its representatives who were examined at Lahore pointed out that the inferior quality and the higher price of the cans supplied by them due to the inferior quality and higher price of the Indian tinplate they were using. They submitted estimates to show that, if they could import American tinplate, they could supply the best quality of cans at a lower price than the American cans. Thus, their price ex-factory, Calcutta, per 1,000 cans would be Rs. 119-4-5 if duty on tinplate were paid, as against the duty-paid landed cost of American cans of Rs. 134-11-0 per 1,000 ; and if they could import tinplates free of duty, their price per 1,000 would be Rs. 105-14-2 as against the duty-free landed cost of American cans of Rs. 110 per 1,000. As regards the quality of cans, they stated that their machinery and methods were as up-to-date as any in the world, but that, so long as they had to use the Indian tinplate, the quality of their cans would suffer because the Indian tinplate was produced by the hot-rolling process and also because palm oil was not being used in its manufacture. It came out in the course of the evidence that the American tinplate used by the fruit canners was manufactured by the cold-rolling process and that such tinplate was, in any case, bound to be superior to the hot-rolled tinplate as produced in India. So far as bottles are concerned, it was represented by the canners that the bottles supplied to them by the Indian manufacturers were unsatisfactory, both in quality and in price. It was said that there was considerable breakage amounting to as much as 20 per cent., that the glass was not of one consistency, that the mouths of bottles varied in size, and that there was no comparison in the general finish between the Indian bottles and English bottles. We were told that these defects of the Indian bottle were largely due to the lack of automatic machines in the Indian glass factories for the manufacture of the right type of bottles. This deficiency, therefore, can be removed if automatic machines are used by the Indian glass manufacturers for the purpose of manufacturing bottles.

Supply of sugar.

12. Indian canners had suffered in recent years on account of the inadequate supply of sugar for their industry. We were informed by the representatives of the Indian Sugar Mills Association that the position regarding the supply of sugar might be somewhat easier in the next year. We do not know how far this will go in satisfying the sugar requirements of the canning industry. In case it is found impossible to

supply adequate quantities of sugar from indigenous sources to the canning industry, we recommend that Government should examine the possibility of importing some quantities of sugar from abroad till the position of indigenous supply becomes easier. The representative of the Indian sugar industry agreed that the importation of a small quantity of sugar in the next two or three years for satisfying the requirements of the canning industry would not be detrimental to the interests of the sugar industry.

Process of manufacture.

13. The main object of canning fruits and vegetables is to prevent the materials from being spoilt by the action of micro-organisms like moulds, yeasts, and bacteria which are always present in the air and in most materials. The germs may be killed or made inactive by one of the two methods :—

(*a*) They may be destroyed by the application of heat where the food materials are hermetically sealed in a can or any other container, thus preventing the intrusion of fresh germs from outside.

(*b*) The germs may also be killed or made inactive by the use of certain chemicals called anti-septics or preservatives, which are harmless when applied in small, specified quantities.

14. (1) *Fruit Canning.*—Firm, ripe fruit is used in canning. It is washed, graded peeled and halved. Fruit thus prepared is put into a can taking care not to allow it to overflow. Syrup of requisite strength is then made by heating and then it is poured into the can leaving one-fourth of an inch space below the top level of the can empty. The lid is then put and the can is exhausted under steam in an exhaust box. Then the can is sealed by double seamer and sterilized in either steam or wat r at boiling temperature or under pressure in the case of non-acid foods for the required period of time. The can is then cooled in cold water till it attains the room temperature.

(2) *Jam.*—Fruit is peeled, cut into small pieces, and heated in a pan till it gets soft and the required quantity of sugar is added. It is then cooked upto a suitable temperature. The jam thus prepared is put into cans which are sealed while hot.

(3) *Jelly.*—Jelly is made of fruit which is rich in pectin such as guava and apple. After preparing the juice, the pulp is strained in a jelly bag and pectin solution is obtained. The solution is then cooked at a suitable temperature. A perfect jelly is clear, sparkling, transparent and of attractive colour.

(4) *Marmalade.*—Pectin solution is obtained in the same way as above from orange, galgal or ponderosa lemon and the required quantity of sugar is added. The orange peel is shredded into strips and its bitterness is removed by boiling it in water. A true fruit marmalade is clear jelly in which slices of fruit or peel are suspended.

(5) *Squash and Cordial.*—The fruit is washed and halved and the juice is then passed through the pulping machine to get rid of the seeds and fibrous matter. The juice thus obtained is mixed with sugar and water according to the recipe. If the juice is sweet, the requisite amount of citric acid is added to increase the acidity. Squash contains substantial portions of the pulp and other cellular matter but cordial is prepared from juice from which pulp and cellular matter have been removed.

Domestic consumption.

15. In the period 1936-39 when there was little domestic production of preserved fruits, the average annual imports amounted to some 60,000 cwts. valued at about Rs. 17 lakhs. In the period 1942-45 the average annual imports amounted to about 16,000 cwts. valued at Rs. 7 lakhs. To this must be added the estimated value of the domestic output of the fruit products, which it is difficult to estimate. Due to the growth of the new habit of eating canned fruits on the part of large numbers of people who were employed in military service during the war and also due to the expansion of urban and industrial population, the consumption of preserved fruits will go up in the future.

Imports.

16. The principal sources of import in the pre-war period were the U. K., the Straits Settlements, Australia and the U.S.A., and in the war period they were Australia and South Africa. A statement of imports, by quantity and value and countrywise, will be found in Appendix IX.

Domestic production.

17. No accurate figures are available regarding the domestic output. As stated earlier in the report, most of the factories were started during wartime with improvised and inadequate machinery. When the factories are equipped with up-to-date machinery as many intend to do in the near future, and when an adequate quantity of sugar is supplied to them and transport facilities improve, domestic output should be capable of very considerable expansion within the next three years.

Exports.

18. We were told that some quantities of squash were being exported out of India. We were also informed that in spite of an overall shortage of food in the country, Government had permitted the export of 10 per cent. of the total preserved fruits produced in the country so as to enable the fruit preservers to renew their contact with the prewar export markets. We could not, however, get the necessary details regarding the volume and value of exports and their destination.

Quality of the indigenous product.

19. Representatives of consumers stated before us that certain brands of Indian squashes, cordials, marmalades and jams were as good as the imported varieties while Indian tomato juice and canned fruits were definitely inferior. The inferior quality of some of the Indian products is undoubtedly due to the absence of proper selection of fruits for canning, insufficient care regarding the observance of proper ratios between fruits and sugar and other ingredients, careless handling of the raw materials, inferior quality of cans and bottles and lack of proper care in canning and bottling and storing. The process of manufacture is rather a simple one. It however requires expert supervision, installation of up-to-date machinery and proper care in handling and storage. When these improvements are effected, we have no doubt that the quality of the Indian product will be as good as that of the imported product.

Estimate of cost of production.

20. The Board's Cost Accounts Officer investigated the cost of production in three factories, *viz.*, Madhu Canning Factory, Bombay, Indian Mildura Fruit Farm, Renala Khurd, District Montgomery, and Ravenscroft, Srinagar. The first factory is mainly producing tomato juice, tomato puree, tomato ketchup, mangoes and pineapples ; the second lemon squash, orange squash,

lime cordial, plum jam, orange marmalade and figs; and the third William pears, peaches, apricots, apricot jam, cherry jam and plum jam. It was obviously impossible for the Board to ascertain the cost of production of all these products and compare them with landed costs. The Board, therefore, selected canned pears and peaches, apricot jam and orange marmalade, and orange squash as the most representative types for this purpose. The accounts of the Madhu Canning Factory were not kept in a form appropriate for preparing an estimate of the unit cost. On the basis of such materials as could be gathered from the account books of the other two firms, certain provisional estimates of cost were made, which were later on modified in the light of observations of practice in the factories, and also of detailed discussion with experts and representatives of the industry at Srinagar, Lahore and Bombay respectively. The final estimates as adopted by the Board are given in the following tables :—

TABLE I

Estimate of cost of one case (24 × A2½ Sanitary cans ; content weight 45 lbs.) of Fruit in Syrup for the period 1947-50.

(Estimated output = 10,00,000 lbs.)

	Pears			Peaches		
	Quantity	Rate	Amount in Rs.	Quantity	Rate	Amount in Rs.
1. Materials—						
(*a*) Fruit (including wastage).	37·5 lbs.	Rs. 11 per md.	5·030	40·5 lbs.	Rs. 23 per md.	11·360
(*b*) Sugar ..	9·0 lbs.	Rs. 26 per md.	2·854	12·0 lbs.	Rs. 26 per md.	3·805
Total materials cost ..			7·884	..		15·165
2. Labour			0·771	..		0·771
3. Other expenses			2·133	..		2·133
4. Depreciation			0·513	..		0·513
5. Research and development. ..			0·234	..		0·234
6. Packing			7·085	..		7·085
7. Advertisement			0·900	..		0·900
8. Interest on working capital at 4% on Rs. 2 lakhs. ..			0·360	..		0·360
			19·880			27·161

TABLE I—*contd.*

	Pears.			Peaches		
	Quantity	Rate	Amount in Rs.	Quantity	Rate	Amount in Rs.
Less—Excise duty on sugar at Rs. 3 per cwt. if sugar is supplied free of excise duty.	..		0·241			0·321
Less—Reduction in cost of cans if tinplate for cans is imported duty-free.	..		0·545			0·545
Total deductions	..		0·786			0·866
Cost of production after adjustment of excise duty on sugar and import duty on tinplate.	..		19·094			26·295
9. Spoilage at 5% ..	..		0·943			1·303
			20·037			27·598
10. Freight allowance ..	..		1·313			1·313
Net cost of production ..	..		21·350			28·911
11. Return on fixed capital at 10% on Rs. 2 lakhs.	..		0·900			0·900
Fair selling price ..	..		22·250 or Rs. 22-4-0 per case			29·811 or Rs. 29-13-0 per case.

Assuming that pears represent 60 per cent. and peaches 40 per cent. of the total output, average fairselling price for the category.

$$= \frac{(\text{Rs. } 22\text{-}4\text{-}0) \times 60 + (\text{Rs. } 29\text{-}13\text{-}0) \times 40}{100}$$

$= \text{Rs. } 25\text{-}4\text{-}5$ per case.

TABLE II

Estimate of cost of one case (48 × 1½ lb. cans ; content weight 72 lbs.) of Jam and Marmalade for the period 1947-50

(Estimated output—10,00,000 lbs.)

	Appricot Jam.			Orange Marmalade		
	Quantity	Rate	Amount in Rs.	Quantity	Rate	Amount in Rs.
1. Materials—						
(a) Fruit(including wastage).	54 lbs.	Rs. 21 per md.	13·829	54 lbs.	Rs. 11 per md.	7·244
(b) Sugar ..	48 ,,	Rs. 26 per md.	15·219	48 ,,	Rs. 26 per md.	15·219
Total materials cost ..	..		29·048	..		22·463
2. Labour ..	..		1·233	..		1·233
3. Other expenses ..	..		3·413	..		3·413
4. Depreciation ..	..		0·820	..		0·820
5. Research and development.	..		0·375	..		0·375
6. Packing ..	..		11·222	..		11·222
7. Advertisement ..	..		1·440	..		1·440
8. Interest on working capital at 4% on Rs. 2 lakhs.	..		0·576	..		0·576
			48·127			41·542
Less—Excise duty on sugar at Rs. 3 per cwt. if sugar is supplied free of excise duty.	..		1·284			1·284
Less—Reduction in cost of cans if tinplate for cans is imported duty-free.	..		1·008			1·008
Total deductions	..		2·292			2·292
Cost of production after adjustment of excise duty on sugar and import duty on tinplate.	..		45·835			39·250

TABLE II—*contd.*

	Appricot Jam			Orange Marmalade		
	Quantity	Rate	Amount in Rs.	Quantity	Rate	Amount in Rs.
9. Spoilage at 5%			2·273			1·944
			48·108			41·194
10. Freight allowance			2·875			2·875
Nett cost of production ..			50·983			44·069
11. Return on fixed capital at 10% on Rs. 2 lakhs. ..			1·440			1·440
Fair selling price			52·423 or Rs. 52-6-9 per case.			45·509 or Rs. 45-8-2 per case.

$$\text{Average fair selling price for the category} = \frac{\text{Rs. 52-6-9 + Rs. 45-8-2}}{2}$$

= Rs. 48-15-6 per case.

TABLE III

Estimate of cost of one case (12 × 26 oz. bottles ; content weight 24 lbs.) of Orange Squash for the period 1947-50

(Estimated output—20,00,000 lbs.)

	Quantity.	Rate	Amount in Rs.
1. Materials—			
(*a*) Fruit (including wastage) ..	17·14 lbs. ..	@ Rs. 13 per md.	2·717
(*b*) Sugar ..	10·80 ,,	@ ,, 26 ,, ,,	3·424
(*c*) Other materials ..			0·427
Total materials cost ..			6·568
2. Labour ..			0·422
3. Other expenses ..			0·922
4. Depreciation ..			0·117
5. Research and development ..			0·125

TABLE III—*contd.*

——	Quantity	Rate	Amount in Rs.
6. Packing ..			6·643
7. Advertisement ..			0·240
8. Interest on working capital @ 4% on Rs. 2 lakhs.			0·069
			15·133
Less—Excise duty on sugar at Rs. 3 per cwt. if sugar is supplied free of excise duty.			0·289
Cost of production after adjustment of excise duty on sugar.			14·844
9. Spoilage at 5% ..			0·736
			15·580
10. Freight allowance ..			1·750
Nett cost of production ..			17·330
11. Return on fixed capital at 10% on Rs. 2 lakhs.			0·240
			17·570
Fair selling price ..			or Rs. 17-9-1 per case.

TABLE IV

Statement of Standard Proportions of Fruit and Sugar

Product	Fruit including wastage		Sugar		Remarks
	per can	per case	per can	per case	
1. Canned Pears ..	25 ozs. (*a*).	37·5 lbs. (*b*).	6 ozs. (*a*).	9 lbs. (*b*).	(*a*) A$2\frac{1}{2}$ cans, content 30 ozs. (*b*) 24 cans, content 45 lbs.
2 Canned Peaches..	27 ozs. (*a*)	40·5 lbs. (*b*).	8 ozs. (*a*).	12 lbs. (*b*)	
3. Appricot Jam ..	12 ozs. (*c*).	54 lbs. (*d*)	10·7 ozs. (*c*).	48 lbs. (*d*).	(*c*) $1\frac{1}{2}$ lbs. cans, content 24 ozs. (*d*) 48 cans, content 72 lbs.
4. Orange Marmalade.	12 ozs. (*c*).	54 lbs. (*d*).	10·7 ozs. (*c*)	48 lbs. (*d*).	
5. Orange Squash .	22·9 ozs. (*e*).	27·14 lbs. (*f*).	14·4 ozs. (*e*)	10·8 lbs. (*f*).	(*e*) 26 ozs. bottles content 32 ozs. (*f*) 12 bottles, content 24 lbs.

TABLE V

Statement of Labour Costs

Name of firm	Estimate of labour cost	Estimated production in lbs.	Estimated labour cost per lb.	Canned fruits content weight 45 lbs.	Jams Marmalades content weight 72 lbs.	Orange squash content weight 24 lbs.
	Rs.		Re.	Re.	Rs.	
1. Ravenscroft Ltd.	17,130	10 lakh lbs.	0·01713	0·771	1·233	
2. Indian Mildura Fruit Farm Ltd.	35,100	20 lakh lbs.	0·01755			0·422

TABLE VI

Statement of other Expenses and Depreciation

	Indian Mildura Fruit Farms Limited, Renala Khurd	Ravenscroft Ltd., Srinagar
	Rs.	Rs.
Other Expenses—		
Power and Fuel	5,150	2,508
Repairs and Maintenance	1,500	200
Consumable Stores	3,900	400
Establishment	45,350	32,800
Printing, Stationery, Postage etc...	4,000	1,500
Insurance	1,800	2,707
Laboratory	500	500
Rents, Rates and Taxes	24	450
Directors' Fee	Nil	1,500
Auditors' Fee	2,500	750
Managing Agents	....	....
Water and Light	300	425
Legal Charges	300	600
Medical Charges	1,500	600
Travelling	7,500	1,500
General	2,500	1,000
	76,824	47,440
Depreciation	9,814	11,377

TABLE VI—*contd.*

——	Indian Mildura Fruit Farms Limited, Renala Khurd	Ravencroft Ltd., Srinagar
Other Expenses—contd.	Rs.	Rs.
Other overheads—rate per lb.	0·0384	0·0474
Depreciation—rate per lb.	0·0049	0·0114
Other overheads—rate per case of 24 lbs.	0·922	....
Other overheads—rate per case of 45 lbs.	....	2·133
Other overheads—rate per case of 72 lbs.	....	3·413
Depreciation—rate per case of 24 lbs.	0·117	....
Depreciation—rate per case of 45 lbs.	....	0·513
Depreciation—rate per case of 72 lbs.	....	0·820

TABLE VII

Statement of Packing Costs

	Case of 24 × A2½ cans	Case of 48 × 1½ lb. cans	Case of 1 doz. 26 ozs. bottles
	Rs.	Rs.	Rs.
Cans	4·110	7·647	....
Bottles	....	....	3·844
Labels	0·600	1·200	0·300
Packing case etc.	2·375	2·375	2·499
	7·085	11·222	6·643

Costs of cans and bottles shown above are the landed costs at the factory. For damages in transit an allowance of 5% in the case of cans and 12½% in the case of bottles has been given.

TABLE VIII

Percentage Statement of Fair Selling Price of Canned Fruits, Jam and Marmalade and Orange Squash

—	Pears	Peaches	Apricot Jams	Orange Marmalade	Orange Squashes
1. Fruit	22·65	38·11	26·38	15·92	15·46
2. Sugar (plus other materials).	11·74	11·68	26·58	30·62	20·27
3. Labour	3·47	2·59	2·35	2·71	2·41
4. Other expenses including research and development.	10·64	7·94	7·22	8·32	5·96
5. Depreciation	2·31	1·72	1·56	1·80	0·66
6. Packing	29·39	21·94	19·48	22·44	37·81
7. Advertisement	4·04	3·02	2·75	3·17	1·36
8. Interest on working capital.	1·62	1·21	1·11	1·27	0·55
9. Spoilage	4·24	4·37	4·34	4·27	4·19
10. Freight allowance ..	5·90	4·40	5·48	6·32	9·96
11. Return on fixed capital ..	4·04	3·02	2·75	3·16	1·37
	100·00	100·00	100·00	100·00	100·00

Comments on the estimates of cost of production.

21. (i) (*a*) *Raw materials.*—Since the three factories which were costed had not kept any systematic records of the proportions of the principal raw materials used, *viz.*, fruit and sugar, the estimates furnished by the managements of the factories could not be taken as accurate. It was, therefore, decided to adopt the figures as given by Dr. Girdhari Lal, Biochemist, Indian Institute of Fruit Technology, Lyallpur, which were based upon experiments and experience at the Lyallpur Institute, and which were generally accepted by the representatives of the industry. These will be found in Table IV. There was also some difficulty experienced in estimating the probable future prices of fruits, representatives of different factories giving different prices. Ultimately, as a result of discussion, certain prices of fruits were agreed to, and these were accepted by the Board. It may be mentioned that the prices, as allowed in the

estimate of cost of production, are somewhat higher than the prices as indicated by the growers' representatives in Srinagar. The list of prices as agreed to at Srinagar and at Lahore respectively are given below :—

	Srinagar			Lahore
	Rs.	a.	p.	Rs.
Apricot per maund	12	8	0	20
Oranges per 100	....			5
Peaches per maund	15	0	0	22
William Pears per maund	8	0	0	10

It was agreed that the Srinagar prices could not be taken as representative for the whole of India. Consequently, the prices agreed to at Lahore were taken as a basis for the estimate of cost. It was also agreed that 200 oranges on an average should be taken as making one maund of weight. To these prices has been added rupee one per maund for cartage from the market or the railway station to the factory.

(*b*) *Sugar.*—As regards the price of sugar, we had originally taken the average of the actual costs of sugar at the three factories, which came to Rs. 18-8-0 per maund. With effect from the 23rd October 1946, however, the Government of India have raised the ex-factory price of sugar to Rs. 24 per maund in the Punjab and in the North West Frontier Province, and to Rs. 20-14-0 per maund in all the other Provinces. As our estimate of cost has been prepared with special reference to the conditions in the Punjab region, we have allowed a price of Rs. 26 per maund inclusive of cost of gunny bags and of freight from a sugar factory to a canning factory. This includes roughly Rs. 1-6-0 on account of the railway freight over an average distance of about 600 miles and annas 10 for the cost of gunny bags, cartage, octroi, etc.

(ii) *Labour.*—It was decided to take the labour costs of the Ravenscroft Factory as representative in respect of canned fruits, jams and marmalades, and those of the Mildura Factory as representative in respect of squashes. It is estimated that the labour costs of the Ravenscroft Factory for an estimated production of 10 lakhs of lbs. of canned fruits, jam and marmalade would be Rs. 17,130, and the labour costs of the Mildura Factory for an estimated output of 20 lakhs of lbs. would be Rs. 35,100. The labour costs per case of canned fruits, jam and marmalade, and orange squash are worked out on this basis in Table V.

(iii) *Other expenses.*—Under the head "other expenses" are included the estimated expenditure on account of power and fuel, repairs and maintenance, consumable stores, establishment and other general overheads, generally on the basis of figures obtained at the Mildura Factory for squashes and at the Ravenscroft factory for other products. Details are given in Table VI.

(iv) *Research and development.*—The expenditure under this item has been allowed at the rate of 1 pie per pound of output which works out to about ·9 per cent. of fair selling price in the case of canned fruits, about ·8 per cent. in the case of jams and marmalades, and about ·7 per cent. in the case of squashes, the average being about ·8 per cent. Under the Fruit Products Control Order, a cess at the rate of annas 4 per Rs. 100 worth of product is collected at present. We recommend that the Fruit Products Control Order should be amended so as to raise the cess to Re. 1 per Rs. 100 worth of product, the value of product for the assessment of the cess being calculated on the same basis as at the present time. Of the total amount

so collected, one-fourth should be spent for the administration of the Control Order and the balance should be set aside in a special Research and Development Fund, to which an equal contribution should be made by the Government of India. This special fund should be administered by an appropriate committee consisting, among others, of representatives of Government, the Indian Council of Agricultural Research, the Board of Scientific and Industrial Research, the Industry, and the fruit growers.

(v) *Packing.*—Details of packing cost are shown in Table VII. The cost of cans is worked out at the rate supplied by Metal Box. The figure taken is the landed cost at the factory including an allowance of 5 per cent. for damages in transit. For bottles, an average rate of Rs. 41 per gross inclusive of freight charges up to the factory is taken with an allowance of 12½ per cent. for breakages in transit. For labels, an average rate of Rs. 25 per thousand is adopted.

(vi) *Interest on working capital.*—It was estimated that the working capital of Rs. 2 lakhs would be sufficient for a representative canning factory such as Ravenscroft and Mildura. Interest on working capital has been allowed at 4 per cent. per annum.

(vii) *Refund of excise duty on sugar.*—There can be no doubt that the high cost of sugar in India is a severe handicap to the Indian preserved fruits industry. In our opinion, the least that should be done to mitigate this handicap is to grant a refund of the excise duty on sugar used in the production of the three categories of preserved fruits to be protected, namely, (i) canned fruits, (ii) jams, jellies and marmalades, and (iii) squashes, juices and cordials. The present rate of excise duty is Rs. 3 per cwt. or *Rs. 0·0268 per lb.* of sugar. The amount of refund in the table of cost of production has been calculated on the basis of the quantity of sugar used in the case of each product.

(viii) *Cost of cans.*—As stated earlier in the report, the cans at present made out of Indian tinplate are inferior in quality and are expensive as compared with American cans. It is estimated that the requirement of tinplate for making sanitary cans for the preserved fruits industry would be between 500 and 600 tons per annum in the next three years. It is possible that, with the development of the industry under the stimulus of protection, its requirement of tinplate might go up to even 1,000 tons per annum. Since packing constitutes one of the biggest items of cost of production, we consider it important that the cost of packing should be reduced as much as possible. Further, as the keeping quality of the products depends partly at least on the quality of the tinplate used for cans, we think it desirable that the best quality of tinplate should be made available to the manufacturers of sanitary cans. Both these advantages can be secured for the preserved fruits industry by importing American tinplate and supplying it free of duty to the can manufacturers. In view of the fact that the Indian tinplate industry is a protected industry, we have considered whether the importation of tinplate of the requisite quality from the U.S.A. free of duty would be detrimental to the interests of the Indian tinplate industry. We discussed the matter at length with the representative of the Tinplate Company and he agreed that the importation of 500 to 600 tons of tinplate free of duty at the present time for fabricating sanitary cans for the industry would not be detrimental to the interests of the Indian tinplate manufacturers, particularly because the supply of Indian tinplate at the present time falls far short of the demand in the country. We, therefore, recommend that Government should take

early steps to import the requisite quantity of tinplate from the U.S.A. and that this tinplate should be supplied free of duty to the manufacturers of sanitary cans in this country. At the present time the biggest producer and supplier of these tin cans is Metal Box Co., who have got an up-to-date plant in Calcutta and who propose in the near future to instal more plants in Bombay, Madras and other places. They have also assured us that, if the American tinplate could be imported by them, they could supply sanitary cans to the Indian canners at a price (ex-factory, Calcutta) lower than the landed cost of American cans. The comparative figures given by the Company are as follows :—

—	Price per 1000 of Metal Box A2½ cans ex-factory, Calcutta	Price per 1000 of American A2½ cans (Landed cost Indian port)
	Rs. as. p.	Rs. as. p.
Made of Indian tinplate	127 8 0	....
Made of American tinplate (duty paid) ..	119 4 5	134 11 0 (duty paid.)
Made of American tinplate (duty-free) ..	105 14 2	110 0 0 (duty-free.)

But we were informed in the course of the oral evidence that some of the fruit canners have got their own can-making plants and that there are also other can makers in the country. We, therefore, recommend that the imported tinplate should be made available free of duty to recognised can-makers in the country. Reduction of cost on account of the supply of duty-free imported tinplate has been calculated in the cost sheets on the basis of data supplied by Metal Box, which show that the cost will go down by Rs. 21-9-10 per 1000 in the case of A2½ cans and by Rs. 20 per 1000 in the case of 1½ lbs. cans. A nominal amount has also been deducted on account of a corresponding decrease in octroi charges on cans.

(ix) *Spoilage.*—Spoilage has been allowed at 5 per cent. of cost of production less allowance for research and development. This is necessary to cover spoilage in stock and in transit. Such spoilage is unavoidable in the peculiar circumstances of the industry.

(x) *Freight allowance.*—To the cost of production thus arrived at should be added a reasonable allowance for freight so as to place the indigenous producers on a footing of equality with the importers at the principal consuming centres. In this particular case, the principal consuming centres are port cities like Karachi, Bombay, Madras and Calcutta, but considerable quantities of canned fruits are also consumed in inland cities like Lahore, Delhi, Cawnpore, Nagpur, Patna, Bangalore, Hyderabad and Mysore. On the other hand, the canning factories are to be found both in the ports like Calcutta and Bombay and in inland centres like Lahore, Delhi and Peshawar. Taking into account the present distribution of the producing and consuming centres in the country, it was thought that the needs of the case would

be met if Lahore were regarded as a representative producing centre and Bombay as a representative consuming centre and the freight from Lahore to Bombay on half the products were included in the cost of production. This has been done. The railway freight between Lahore and Bombay is approximately Rs. 5 per maund. Allowance at half the above rate per maund has been included so as to put the indigenous products on parity with the landed cost of the imported products at the ports. For this purpose the weight of the pack in the three cost sheets has been taken as follows :—

24—A2½ can pack	..	65 lbs. (pears and peaches).
48—1¼ lb. can pack	..	95 lbs. (jams).
12 bottles of squash pack	..	58 lbs. (squashes).

(xi) *Return on fixed capital.*—It was estimated that a sum of Rs. 2 lakhs for the block capital would be adequate for an up-to-date factory of a reasonable size. It may be mentioned that the present value of the block of the Madhu Canning Factory is Rs. 40,211 ; of the Mildura Factory Rs. 2,03,643 ; and of Ravenscroft Rs. 93,815, and that the estimated future values of the blocks with the proposed extensions and improvements at these three factories are : Rs. 2,30,000, Rs. 2,53,000 and Rs. 2,07,000, respectively. Considering the values of the present blocks and the future blocks as proposed by the factories, the Board thought that a sum of Rs. 2 lakhs should be adequate for this purpose. Return on the block has been allowed at 10 per cent. per annum.

Existing duties.

22. The existing duties on fruit products are as follows :—

Item 20 .. Jams, jellies, etc., canned or bottled—30% *ad valorem.*

Item 20 (1) .. Fruit juices—

(i) Standard rate 36% *ad valorem.*

(ii) Preferential rate in favour of a British Colony —24% *ad valorem*, and

(iii) Preferential rate in favour of Burma—12% *ad valorem.*

Item 20 (2) .. Fruits and Vegetables, canned or bottled—

(i) Standard rate 36% *ad valorem.*

(ii) Preferential rate in favour of a British Colony—24% *ad valorem*, and

(iii) Preferential rate in favour of Burma—12 % *ad valorem.*

23. The main source of imports of canned fruits, jams and marmalades etc., at the present time is Australia. Inquiries from chief importers show that no squashes have been imported into India in recent months. The latest and lowest prices of imports, so far as we have been able to ascertain, are as follows :—

Cost of imports.

(A)

AUSTRALIAN FRUITS IN SYRUP

Cost per case of 2 doz. 30 oz. cans

—	Pears	Peaches	Average
	Rs. a. p.	Rs. a. p.	Rs. a. p.
C.i.f.	16 4 1	15 11 5	15 15 9
Duty at 36 per cent. ..	5 13 8	5 10 6	5 14 1
Clearing charges ..	1 4 0	1 4 0	1 4 0
Landed cost ..	23 5 9	22 9 11	23 1 10

(B)

AUSTRALIAN JAMS AND MARMALADES

Cost per case of 48 × $1\frac{1}{2}$ lb. cans

—	Jams	Marmalades	Average
	Rs. a. p.	Rs. a. p.	Rs. a. p.
C.i.f.	27 1 0	29 3 0	28 2 0
Duty at 30 per cent.	8 1 4	8 12 1	8 6 9
Clearing charges	1 0 0	1 0 0	1 0 0
Landed cost	36 2 4	38 15 1	37 8 9

(C)

As squashes and fruit juices have not been imported into the country in recent months, it was not possible for us to ascertain the exact prices of imported squashes,

juices and cordials at the present time. On the basis of the latest quotation, f.o.r. Australia, for squashes, we estimate the lowest prices of imported squashes as follows :—

Estimated prices of imported Australian squashes per doz. standard (26 oz.) bottles

	Rs. a. p.
F.o.r. Australia	11 4 7
Freight, insurance, etc., at 15% of f.o.r. price	1 11 1
C.i.f.	12 15 8
Duty at 36%	4 9 5
Clearing charges	0 8 0
Landed cost	18 1 1

24. In order to determine the amount of protection for the preserved fruits industry, we have to find out the margin of difference between the fair selling prices of representative categories of indigenous products and the costs of competing imports. In the light of all available evidence, we came to the conclusion that canned pears and peaches should be regarded as representative of all canned fruits, apricot jam and orange marmalade as representative of all jams, jellies and marmalades, and orange squash as representative of all fruit juices, squashes and cordials. In the case of indigenous fruits in syrup, we have taken, as suggested by the industry, the weighted average of the fair selling prices of pears and peaches in the ratio of 60 to 40, while in the case of jams and marmalades, we have taken the simple average of the fair selling prices of the two articles. Similarly, in the case of imported fruits in syrup, we have taken the simple average of canned peaches and apricots.

Measure of protection.

Measure of protection

—	Fruits in syrup 24 × A2½ (30 ozs.) cans.	Jams and marmalades 48 × 1½ lb. cans	Squashes 12 × 26 oz. bottles
	Rs. a. p.	Rs. a. p.	Rs. a. p.
A—Average fair selling price of indigenous products.	25 4 5	48 15 6	17 9 1
B—Comparative c.i.f. price without duty.	15 15 9	28 2 0	12 15 8
C—Clearing charges ..	1 4 0	1 0 0	0 8 0

Measure of protection—contd.

—	Fruits in syrup 24 × A2½ (30 oz.) cans	Jams and marmalades 48 × 1½ lbs. cans	Squashes 12 × 26 oz. bottles
	Rs. a. p.	Rs. a. p.	Rs. a. p.
D—Landed cost without duty (B & C).	17 3 9	29 2 0	13 7 8
E—Amount of duty necessary (A—D).	8 0 8	19 13 6	4 1 5
F—Necessary duty as percentage of c.i.f.	50·3	70·5	31·9
G—*Existing duty*—			
(i) Standard rate ..	36%	30%	36%
(ii) Preferential, British colony.	24%	....	24%
(iii) Preferential, Burma ..	12%	....	12%

It will be seen that on the basis of comparison between the fair selling price for the Indian manufacturer and the likely cost of importation, the amount of duty necessary to safeguard the home industry is 50·3 per cent. in the case of fruits in syrups, 70·5 per cent. in the case of jams and marmalades, and 31·9 per cent. in the case of squashes, but we are recommending the levy of a duty of 60 per cent., 80 per cent., and 40 per cent., respectively. We are deliberately making this recommendation, so that the additional duty, which ranges from about 8 per cent. to 10 per cent. would enable the Indian manufacturer to overcome the strong prejudice against the indigenous product with which he has to contend in order to survive. The extra margin should also enable him to establish himself in the market by offering the Indian products at a price slightly but definitely lower than the imported product. We hope that it would be possible for the Indian manufacturer to offer their goods approximately 10 per cent. cheaper than the imported goods. This, in our opinion, should be sufficient margin to enable the Indian manufacturer to neutralise the prejudice that exists. It must, however, be clearly understood that during the period of protection recommended by us the Indian manufacturer should take all possible steps to overcome such prejudice and that, in any case, if this industry comes for re-examination at the end of the protection period, there should be no need for any such additional cushion in the matter of duty. It is possible that within the proposed period of protection, these products may be imported from countries other than Australia. We have evidence that South African jams and marmalades were being imported as lately as June 1946, the duty-paid landed cost per 48 × 1½ lb. cans averaging Rs. 17-10-0 as compared with the duty-paid landed cost of Australian jams and marmalades per 48 × 1½ lb. cans of Rs. 37-8-9 taken

by us for purposes of comparison. That is to say, as recently as June 1946, South African jams and marmalades were imported into the country at a price which was less than 50 per cent. of the present price of imports from Australia. This is a further justification for an additional margin by way of cushion between the fair selling prices of Indian products and the duty-paid landed costs of imports. At the same time, we think it desirable that, in the case of this industry, of which the future competitive efficiency will depend a good deal on scientific methods of production and improved organisation, both in its agricultural and manufacturing aspects, the margin of protection should not be so high as to blunt the edge of all incentive to progress and thus to perpetuate inefficiency. There is evidence to show that certain sections of the industry have been none too careful in keeping a strict watch over the cost of production. We recommend that a proper system of keeping accounts should be followed by the industry, using standard units of weights and measures in the case of materials used, so that, should the industry come up again for review at the end of the present protection period, it would be possible to work out the cost of production without much trouble. The standard rate of duty on canned fruits—Item 20 (2), Import Tariff Schedule—should be raised from 36 per cent. to 60 per cent. *ad valorem*, the rate on jams and on marmalades—Item 20—from 30 per cent. to 80 per cent. *ad valorem*, and the rate on squashes—item 20 (1)—from 36 per cent. to 40 per cent. *ad valorem* ; the duties should be made protective and they should remain in force for the period ending 31st March 1950. Should the landed cost of imports without duty fall by 5 per cent. or more below those we have taken for the purpose of comparison, the protection of the industry would be jeopardised. In such an event, it would be open to the industry to appeal to Government to invoke section 4 (*1*) of the Indian Tariff Act of 1934 and to raise the duties to the necessary level. The preferential rates in favour of British colonies and Burma should be abolished.

Classification of imported fruit products.

25. The existing classification of fruit products in the Import Tariff Schedule is as follows :—

Item No. 8	..	Fruits, all sorts, fresh, dried, salted or preserved, not otherwise specified.
Item No. 20	..	Vegetable product, jams, jellies, pickles, chutnies, sauces, and condiments, canned or bottled.
Item No. 20 (1)	..	Fruit juices.
Item No. 20 (2)	..	Fruits and vegetables, canned or bottled.

It was submitted to us that the existing classification is not very satisfactory as it (1) lumps together articles of different kinds and (2) prevents proper statistical analysis either of imports or of indigenous production. We therefore recommend that the following classification should be adopted in future in the Import Tariff Schedule, in the account of Sea-borne and Frontier Trade and also in the statistics of the Food Products Control Order.

Item No. 8	..	Dried fruits (salted and all other kinds).
Item No. 8 (1)	..	Fruits, all sorts, not otherwise specified.
Item No. 20	..	Canned and bottled fruits.

Item No. 20 (1)	..	Canned and bottled vegetables.
Item No. 20 (2)	..	Fruit juices, squashes, cordials and syrups.
Item No. 20 (3)	..	Jams, jellies, marmalades, candied and crystallised fruits.
Item No. 20 (4)	..	Ketchups, chutnies, sauces, vinegar, canned or bottled.

26. Although all these items are at present covered by the indigenous industry, we confined our inquiry only to items 20, 20 (2) and 20 (3) of the suggested new classification, because these are the three items in which there is serious competition between imports and indigenous products. On item 20, we recommend a protective duty of 60 per cent. *ad valorem*, on item 20 (3), a protective duty of 80 per cent. *ad valorem*, and on item 20 (2), a protective duty of 40 per cent. *ad valorem*. The rates on the other four items in the above list should remain, as at present, on the basis of revenue duties.

Other kinds of assistance.

27. Though an adequate protective duty is required to safeguard this industry against the competition of imports, protection by itself is not calculated to place it on a strong and stable basis or to ensure its development along healthy lines. To achieve that object, it will be necessary for Government and the other parties concerned to assist the industry in the following ways besides those previously indicated.

(*a*) *Refund of import duty on machinery.*—Most of the machinery employed by the industry at present was improvised and fabricated in India during wartime. It is essential that the industry must be equipped with up-to-date machinery. We, therefore, recommend that the import duty on all machinery imported for the use of this industry with effect from the 16th February 1946 (that is, the date of reference of the case to the Tariff Board) should be refunded. We further recommend that all facilities should be given to the industry to import suitable machinery from the cheapest sources in foreign countries.

(*b*) *Supply of bottles.*—In view of the defects of Indian bottles as stated in paragraph 11 above, it was argued that the fruit preservers in India should be permitted to import foreign bottles until the Indian manufacturers could produce bottles of a satisfactory quality. In order to ascertain the views of the bottle manufacturers themselves on the subject of this demand, the Board invited three of the principal glass manufacturers to send their representatives to meet the Board. Only the Technical Director of Bombay Glass Works, Mr. Edmond Lindenberger, responded to the invitation and met the Board for an informal discussion on the 2nd November 1946. Sardar Bahadur Lal Singh and Mr. Kashalkar, one of the Vice-Presidents of the Fruit Preservers' Association, were also present by special invitation. It was gathered from Mr. Lindenberger that the defects of the Indian bottles in the past were due mainly to lack of automatic machinery, proper annealing equipment and some necessary chemicals, but that these defects would be eliminated in the near future. He further informed the Board that the Bombay Glass Works had already got the equipment which would be put into operation during November 1946 and that its sister concern, the Allahabad Glass Works, Naini, would get the new equipment installed in about six months' time. He also stated that, according to

his information, at least 20 such automatic machines for manufacturing high quality bottles would be installed in the country within a year or so. He assured the Board that the full requirement of India in respect of such bottles could be met by the proposed installation of these automatic machines. As regards the price, he informed the Board that his price ex-factory for November and December 1946 would be Rs. 36 per gross but that it could be reduced very considerably if the fruit preservers of India adopted a convention regarding the use of one or two standard types of bottles and if they placed large orders for bottles on the basis of a consolidated demand. We have good reasons to believe that this improvement in quality and reduction in pirce is a definite possibility. We suggest that representatives of the Fruit Preservers' Association and those of the leading glass manufacturers should meet in conference at an early date and discuss the matter in all its bearings. We recommend that the question of granting import licences for bottles more freely should be decided after considering the views that may be formulated and forwarded to Government by the Fruit Preservers' Association at the end of the conference suggested above.

(c) *Training of experts.*—It was brought out in the evidence that there is at present a great dearth of trained men to serve as experts in the preserved fruits industry. Most of the factories are now being supervised by persons who have picked up some theoretical knowledge from books and some experience in the factories concerned but who are without any systematic training in the technique of fruit preservation. The spokesmen of the industry complained of the difficulty of getting such men, even though they were prepared to offer handsome salaries for competent persons. We recommend that facilities for training experts in the technology of fruit preservation should be enlarged not only by admitting a reasonably large number of students in the Institute of Fruit Technology, but also by the offer of suitable financial assistance to those Universities and Agricultural Colleges which are prepared to offer such training facilities on approved lines. We think it desirable that an early inquiry should be made for ascertaining whether and how far such facilities can be provided by the Universities and Agricultural Colleges. We also understand that certain canning factories are desirous of sending their own men abroad for getting the necessary training. We recommend that Government should give all assistance to such persons to secure proper training facilities in foreign countries.

(d) *Employment of foreign experts for short periods.*—It is almost certain that the proposed extension of training facilities will take a few years to turn out an adequate number of experts for the needs of the industry. We therefore think it desirable that, in the meantime, Government should take steps to employ some six foreign experts, two on the engineering side and four on the chemical side, whose advise and guidance should be made available free of cost to all the canning factories. We think that such experts need not be appointed for a longer period than, say, three years.

(e) *Cold storage and refrigerated transport facilities.*—Due to the seasonal production of fruits and their perishable nature, canning operations cannot be continued for more than six to eight months in the year even under the most favourable circumstances. Some extension of the canning season will be possible if cold storage facilities on a reasonable scale are provided by Government at suitable centres. Such facilities should be supplemented by the provision of refrigerated transport facilities. The matter, however, is not a simple one, and it has its technical and economic aspects. We recommend that it should be examined by Government at an early date.

(*f*) *The Fruit Products Control Order.*—This Order should be strictly enforced in all canning factories, particularly as the products are meant for human consumption, special attention being paid to keeping the premises healthy and clean and avoiding risks of contamination and poisoning.

(*g*) *Export facilities.*—We were informed by the Fruit Development Adviser to the Government of India that Government have permitted the export of 10 per cent. of the total output of the fruit products in order to enable the industry to renew its contact with the prewar export markets. We recommend that this should be continued.

(*h*) *Railway freight rates.*—It was complained to us by the fruit preservers that the rates of railway freight on fruits, fruit products and flattened cans is excessive as compared with the rates on similar articles in foreign countries. We had no data to examine the complaint. We recommend that the Railway Board should favourably consider the matter if and when an application is made on behalf of the preserved fruits industry for a reduction of the freights on these articles.

(*i*) *Compensation for loss in transit by rail.*—Representatives of the fruit preservation industry in the course of their oral evidence complained to us that though they send their fruit products to the consignees at railway risk after paying for the necessary insurance, the railway authorities have often shown complete indifference in considering and meeting their claims on account of loss due to breakage in the course of transit by rail. We had no opportunity to investigate whether or not this complaint is justified. We, however, recommend that the subject-matter of the complaint should be investigated by the Railway Board at an early date, and that if the complaint is found to justified, steps should be taken to ensure that in future all claims for compensation for losses in transit in such cases are promptly dealt with.

(*j*) *Improvement of horticulture.*—The future progress of the preserved fruits industry must depend to a large extent on the availability of adequate fruits of the right quality at reasonable prices. We recommend that the Central, Provincial and State Governments should initiate at an early date a co-ordinated policy of horticultural development, including both production and marketing.

Jammu and Kashmir State.

28. The State of Jammu and Kashmir is in a specially advantageous position regarding fruit growing and fruit canning. The State Government should give every possible encouragement to the development of the fruit preservation industry. Among other forms of assistance, we draw the attention of the State Government specifically to the following :—

(*a*) The exemption from import duty on machinery and on raw materials like cans and sugar, which is now given for a limited period, should be extended.

(*b*) The road toll charged on the preserved fruits should be abolished.

(*c*) The present exemption of preserved fruits from any export duty should be continued.

(*d*) The import duty of 15 per cent. on glass jars should be refunded when preserved fruits bottled therein are exported.

(*e*) To enable the canners to purchase fresh fruits at reasonable prices, a number of primary markets for fresh fruits should be established in suitable places within the State.

(*f*) A fruit research sub-station should be established at Srinagar under the Central Fruit Research Scheme of the Government of India.

(*g*) The scheme which the Government of India have in view for establishing subsidised cold storage plants in various parts of the country should be extended to the State as well.

Burden of protection.

29. Though the protective duties we have recommended may appear to be rather high, their probable incidence cannot be considered to be heavy, if we keep in view the general rise in the price level and cost of living. The probable retail prices of these various products under the proposed scheme of protection may be worked out by following the usual trade practice in this line of adding 50 per cent. to the landed cost of imports. On this basis, the retail price of pears per A2½ can would be Rs. 1-11-3, of peaches per A2½ can Rs. 1-10-5, of jams per 1½ lb. can Rs. 1-8-10, of marmalade per 1½ lb. can Rs. 1-10-9 and of squashes per 26 oz. bottle Rs. 2-4-0. The pre-war retail price of pears for the same unit varied from 11 annas to 14 annas and the extent of rise in price in this case would therefore range from 95 per cent. to 148 per cent. The retail price of peaches for the same unit in the pre-war period varied from 11 annas to 14 annas, and the extent of rise in price in this case would vary from 89 per cent. to 140 per cent. The retail price of jam in the pre-war period for the same unit was 8 annas and the extent of rise in price in this case would be approximately 200 per cent. In the case of squashes, the pre-war retail price for the same unit was Rs. 1-9-0 and the extent of rise in price of the article in question would be 44 per cent. When this probable rise in the price of the articles in question under our scheme of protection is compared with the rise in the wholesale price index number which has gone up by 200 per cent. the incidence of the proposed duties on the prices of the articles in question cannot be considered to be high. Moreover, on account of the existence of a large number of factories in the country, there is bound to be keen internal competition, which will check any tendency for prices to rise. Lastly, preserved fruits are generally eaten by the middle and upper classes of people, who are comparatively in a better position to bear the burden involved in the higher duties during the period of protection and consolidation of the industry.

Eligibility for protection.

30. Considering that it was greatly expanded only during wartime and had to suffer from various handicaps such as lack of imported machinery, inadequate supply and excessive price of sugar, costliness and inferior quality of cans, and dearth of suitable experts, we think that the industry, on the whole, has been established and conducted on sound business lines. We also consider that it has got sufficient comparative advantages by way of raw materials such as fruits, market and labour supply so as to become independent of protection within a reasonable period of time. Furthermore, the establishment and expansion of the industry will give a great stimulus to the development of the horticultural industry with its great value as a subsidiary of agriculture, the principal industry of the country. We, therefore, consider that the protection of this industry is in the larger interest of the nation.

Summary of recommendations.

31. Our recommendations are summarised as under :—

(i) Fruits and Fruit Products should be re-classified in the Import Tariff Schedule, in the Accounts of Sea-borne and Frontier Trade and also in the statistics of the Food Products Control Order as indicated in paragraph 25.

(ii) The standard rate of duty on canned and bottled fruits—suggested item 20—should be 60 per cent. *ad valorem*; the rate on fruit juices, squashes, cordials and syrups—suggested item 20 (2)—should be 40 per cent. *ad valorem*; the rate on jams, jellies, marmalades and candied and crystallised fruits—suggested item 20 (3)—should be 80 per cent. *ad valorem*; the duties should be made protective and they should remain in force for the period ending 30th March 1950. Should the landed cost of the imports without duty fall by 5 per cent. or more below those we have taken for the purpose of comparison, it should be open to the industry to appeal to Government to invoke section 4 (*1*) of the Indian Tariff Act of 1934 and to raise the duties to the necessary level. The preferential rates in favour of British Colonies and Burma should be abolished. Paragraphs 24 and 26.

(iii) The import duty on all machinery required for the use of the preserved fruits industry should be refunded with effect from the 16th February 1946. All facilities should be given to the industry to import suitable machinery from foreign countries. Paragraph 27 (*a*).

(iv) An adequate quota of sugar should be given to the industry; if necessary, steps should be taken to import sugar for this purpose. Paragraph 12.

(v) The excise duty on sugar used for the protected categories of preserved fruits should be refunded. Paragraph 21 (vii).

(vi) 500 to 1,000 tons of American tinplate should be imported free of duty and made available to recognised manufacturers of sanitary cans required for the preserved fruits industry. Paragraph 21 (viii).

(vii) Representatives of the Fruit Preservers' Association and those of the leading glass manufacturers should meet in conference at an early date and discuss the question of supply of high quality bottles for the preserved fruit industry. The question of granting import licences for bottles more freely should be decided by Government after considering the views that may be formulated at the conference. Paragraph 27 (*b*).

(viii) The Fruit Products Control Order should be amended so as to raise the cess payable by the fruit products factories from 4 annas to Re. 1 per Rs. 100 worth of product. Of the amount so collected, one-fourth should be spent for the administration of the Control and the balance should be set aside in a special Research and Development Fund, to which an equal contribution should be made by the Government of India. This special Fund should be administered by an appropriate representative committee. Paragraph 21 (iv).

(ix) Facilities for training experts in the technology of fruit preservation should be enlarged. Paragraph 27 (*c*).

(x) Government should take steps to employ six foreign experts for a period of about three years for giving advice and guidance free of cost to all the canning factories. Paragraph 27 (*d*).

(xi) The question of providing cold storage and refrigerated transport facilities should be examined by Government at an early date. Paragraph 27 (*e*).

(xii) The Fruit Products Control Order should be strictly enforced in all the canning factories. Paragraph 27 (*f*).

(xiii) The present provision permitting the export of not more than 10 per cent. of food products should be continued. Paragraph 27 (*g*).

(xiv) If and when an application is made by the preserved fruits industry to the Railway Board for a reduction of the freight rates on fruits, fruit products and flattened cans, the application should be favourably considered by the Railway Board. Paragraph 27 (*h*).

(xv) The Railway Board should investigate at an early date whether or not there is any justification for the complaint made to us by the fruit preservers that claims for compensation for loss in transit of fruit products sent to the consignees at railway risk have been ignored by the railway authorities. If the complaint is found to be justified, steps should be taken to ensure that in future all claims for compensation in such cases are promptly dealt with. Paragraph 27 (*i*).

(xvi) The Central, Provincial and State Governments should initiate at an early date a co-ordinated policy of horticultural development, including both production and marketing. Paragraph 27 (*j*).

(xvii) The attention of the Government of Jammu and Kashmir is drawn to the recommendations that we have made in paragraph 28 for assistance to the industry in the State.

Acknowledgments.

32. The Board wishes to offer its thanks to the Government of Jammu and Kashmir for providing accommodation and other facilities to the Board for conducting the inquiry in the State; to Mr. Aftab Rai, Regional Commissioner for Disposals, Lahore, for providing accommodation to the Board in his office and also for giving all other facilities during the inquiry at Lahore; to Sardar Bahadur Lal Singh, Fruit Development Adviser to the Government of India and a great champion of the industry, for giving valuable information and expert advice to the Board during the whole inquiry; to Mr. O. N. Anand, the cost Accounts Officer attached to the Board, for investigating the costs of three factories under rather difficult circumstances; to Dr. Girdhari Lal, Bio-Chemist, Institute of Fruit Technology, Lyallpur, for making helpful suggestions on important technical matters; to Dr. Kelkar, the Board's Technical Adviser, for assistance in preparing the case; and to Dr. Rama Varma, the Assistant Secretary to the Board, for ably supervising the preparation of the case.

The Board had addressed the Punjab Government in a letter dated the 14th June 1946, asking for office accommodation in Lahore from the 9th to the 16th October. The Board was informed by the Punjab Government in a letter dated the 19th September 1946, that is, four months after the request had been sent, that no accommodation would be available for the Board in Lahore during the inquiry.

While we were in Lahore, we learnt that the Legislative Assembly was not sitting at the time and that accommodation for the Board could have been provided in the Assembly Chamber if the Punjab Government had been a little more sympathetic. We had decided to conduct the inquiry at Lahore on the ground that the Punjab was the most important Province both for fruit farming and for fruit preservation and in the belief that our inquiry at the headquarters of the Provincial Government would stimulate popular interest in the development of the industry in question. We regret to say that we did not receive from the Punjab Government the necessary facilities for the inquiry to which we feel we were entitled.

SHANMUKHAM CHETTY—President.

C. C. DESAI—Member-Secretary.

NAZIR AHMAD—Member.

H. L. DEY—Member.

S. C. AGGARWAL—Deputy Secretary.

Dated 28th November 1946.

APPENDIX I

DEPARTMENT OF COMMERCE

RESOLUTION

TARIFFS

New Delhi, the 3rd November 1945

No. 218-T (55)/45.—In the statement on industrial policy issued by the Government of India on the 23rd April 1945, it was announced that, pending the formulation of a tariff policy appropriate to the post-war needs and conditions of the country and the establishment of permanent machinery for the purpose, Government would set up machinery for investigating claims from industries, which have been started or developed in war-time and which are established on sound lines, to assistance or protection during the transition period. A press communique issued on the same date invited industries to address their claims to the Secretary to the Government of India in the Department of Commerce.

2. Several industries have accordingly applied for assistance or protection, and on a preliminary examination of their claims, the Government of India have come to the conclusion that applications submitted by the following industries call for a detailed examination :—

(i) non-ferrous metals, including antimony ;

(ii) grinding wheels ;

(iii) caustic soda and bleaching powder ;

(iv) sodium thiosulphate, sodium sulphite anhydrous, sodium bisulphite ;

(v) phosphates and phosphoric acid ;

(vi) butter colour, aerated water powder colour ;

(vii) rubber manufactures ;

(viii) fire hose ;

(ix) wood screws ;

(x) steel hoops for baling.

Other applications are under the consideration of Government, and further action in their case will be taken in due course.

3. In addition to the industries which have applied for assistance or protection, there are certain industries the starting of which was considered essential by the Government of India under conditions created by the war. Early in 1940, Government announced that specified industries promoted with their direct encouragement during war-time might feel assured that, if they were conducted on sound business lines, they would, by such measures as Government might devise, be protected against unfair competition from outside India. In accordance with this decision,

the following industries have been given an assurance of protection against unfair competition after the war :—

(i) bichromates ;

(ii) steel pipes and tubes up to a nominal bore of 4 inches ;

(iii) aluminium ;

(iv) calcium chloride ;

(v) calcium carbide ;

(vi) starch.

Of these industries, only those engaged in the manufacture of bichromates, calcium chloride and starch have so far applied for assistance or protection during the transition period. The Government of India consider that the applications submitted by these three industries also call for immediate investigation.

4. For the purpose of these and any subsequent investigations, the Government of India have decided to set up a Tariff Board for a period not exceeding two years, in the first instance. The Board will consist of :—

PRESIDENT :

Sir R. K. Shanmukham Chetty, K.C.I.E.

MEMBERS :

Mr. C. C. Desai, C.I.E., I.C.S.

Professor H. L. Dey, D.Sc. (London).

The Board will include one more Member whose name will be announced shortly. Mr. Desai will act as Secretary to the Board in addition to his duties as Member.

5. The Tariff Board is requested to undertake, in such order as it thinks fit, the investigation of claims put forward by the industries specified in paragraphs 2 and 3 above. In the case of each industry the Board will, after such examination as it considers necessary, report whether the industry satisfies the following conditions :—

(1) that it is established and conducted on sound business lines ; and

(2) (*a*) that, having regard to the natural or economic advantages enjoyed by the industry and its actual or probable costs, it is likely within a reasonable time to develop sufficiently to be able to carry on successfully without protection or State assistance ; or

(*b*) that it is an industry to which it is desirable in the national interest to grant protection or assistance and that the probable cost of such protection or assistance to the community is not excessive. Where a claim to protection or assistance is found to be established, *i.e.*, if condition (1) and condition (2) (*a*) or (*b*) are satisfied, the Board will recommend—

(i) whether, at what rate and in respect of what articles, or class or description of articles, a protective duty should be imposed ;

(ii) what additional or alternative measures should be taken to protect or assist the industry; and

(iii) for what period, not exceeding three years, the tariff or other measures recommended should remain in force.

In making its recommendations the Board will give due weight to the interests of the consumer in the light of the prevailing conditions and also consider how the recommendations affect industries using the articles in respect of which protection is to be granted. Since relief, to be effective, should be afforded without delay, the Board is requested to complete its enquiries with all possible expedition and to submit a report as soon as the investigation of the claim of each industry is concluded.

6. The headquarters of the Board will be at Bombay, but it will visit such other places as it thinks necessary for purposes of its enquiries. Firms and persons interested in any of these industries, or in industries dependent on the use of the products of these industries, who desire that their views should be considered, should address their representations to the Secretary to the Board.

7. Any claims hereafter received from other industries which in the opinion of the Government of India are suitable for examination by the Board will be referred to the Board in due course for examination.

8. The Government of India trust that Provincial Governments and Administrations will afford the Board all the assistance which it may require and will comply with any request for information which may be addressed to them by it.

N. R. PILLAI,
Secretary.

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APPENDIX II

GOVERNMENT OF INDIA

Department of Commerce

New Delhi, the 16th February 1946

RESOLUTION

Tariffs

No. 218-T (55)/45.—In pursuance of paragraphs 2, 3 and 7 of their Resolution in the Department of Commerce, No. 218-T (55)/45, dated the 3rd November 1945, the Government of India have decided to refer to the Tariff Board for investigation applications for assistance or protection received from the following industries, namely :—

(i) Glucose ;

(ii) All Abrasives other than Grinding Wheels ;

(iii) Hurricane Lanterns ;

(iv) Cocoa powder and Chocolate ;

(v) Aluminium ;

(vi) Preserved Fruits.

2. In making its enquiries, the Board will be guided by the principles laid down in paragraph 5 of the Resolution referred to above.

3. Firms or persons interested in any of these industries or in industries dependent on the use of these articles, who desire that their views should be considered by the Tariff Board, should address their representations to the Secretary to the Board, Caltex House, Ballard Estate, Bombay 1.

4. Similar announcements will be made from time to time regarding claims from other industries found suitable for examination by the Board.

N. R. PILLAI,

Secretary to the Government of India.

APPENDIX III

Preserved Fruits

List of Manufacturers to whom Questionnaires were issued

S. No.

Bombay—

1 1. Union Trading Co., Ltd., P. O. No. 116, Graham Road, Ballard Estate, Bombay.

2 2. Johnson Phillips & Co. (Eastern), Ltd., Hornby Road, Fort, Bombay.

3 3. S. Keshavlal & Co. Albert Buildings, Fort, Bombay.

4 4. Mody & Co., Engineer Buildings, 365 Princess Street, Bombay.

5 5. Madhu Canning Co., Ltd., Bombay 14.

6 6. A. Kalvert & Co., 123, Upper Duncan Road, Bombay.

7 7. Hind Laboratories Ltd., 217/19, Shivaji Park, North End, Cadell Road Junction, Bombay 28.

8 8. Pure Products Ltd., 1, Home Street, Fort, Bombay.

9 9. Hillman Manufacturing Co., Love Lane, 1st Cross Street, Byculla, Bombay.

10 10. Rural Products Co., Ltd., P. O. Box 33, 952, Sadashiv, Poona 2.

11 11. D. & P. Products, 72, Pali Danda Road, Bandra, P. O. Bag 6652, Bombay.

12 12. Wimzolla Fruit Preserving Co., 85, Love Lane, Bombay.

13 13. Corn Products (India) Ltd., P. O. Box No. 994, Bombay.

14 14. Personal Products (India) Ltd., Manak Villa, Nehru Park, Ville Parle (East), Bombay.

15 15. Faraj Muary & Co., Arthur Bunder Road, Colaba, Bombay.

16 16. Fruit Farms Products, 319, Hornby Road, Fort, Bombay.

17 17. Dr. D. Writer & Co., Dadar, Bombay 14.

18 18. Kashmir Canning Co., Ltd., C/o Messrs. Shadik & Co., Bell Buildings, Sir P. M. Road, Fort, Bombay.

19 19. Hasba Fruit Products, No. 24, Nihal Peth, Poona 2.

S. No.

Madras—

20 1. The MacDowell & Co., Ltd., 2/6, Jahangir Street, Second Line Beach, Madras.

21 2. India Fruits Ltd., Kadiam (East Godawari District).

22 3. Sri Chamundeswari Industries (Madras), Kodur P. O., District Cuddapah.

23 4. Hindustan Canning Co., Kodial Bail, P. O. Mangalore (S. India).

C. P.—

24 1. Vanguard Fruit Industries, Diwanji Mahal, Nagpur.

25 2. Manak Chand Kissen Dass, Utran Via Pachora, G. I. P. Rly., India.

26 3. Sundala Fruit Farms, Jubbulpore (C. P.).

27 4. Student Fruit Products, Dhantoli, Park Avenue, Nagpur.

28 5. C. O. Fruit Preserving Co., Itwari, Nagpur.

29 6. Mr. U. K. Dasgupta, Krishna Kunj, Wright Town, Jubbulpore.

Bengal—

30 1. Bengal Gardeners, 78, Clive Street, Calcutta.

31 2. Bengal Canning & Condiments Works Co., 15, Clive Street, Calcutta.

32 3. B. N. Elias & Co., Ltd., Norton Buildings, 1 & 2 Old Court House Corner, Calcutta.

33 4. Asiatic Food Products, Gopalpur, District Rajshahi (Bengal).

34 5. Daw Sen & Co., 29, South Road, Entally, Calcutta.

35 6. Tims Products Ltd., P-6, Mission Row Extension, Calcutta.

36 7. Rosaline Products, 8, Marquis Street, P. O. Park Street, Calcutta.

37 8. Sreekissen Dutt & Co., 128, Middle Road, Entally, Calcutta.

38 9. I. Musry & Co., 11/A, Dacres Lane, Calcutta.

39 10. The Metal Box Co. of India Ltd., P. O. Box No. 2123, Hide Road, Kidderpore, Calcutta.

40 11. Imperial Fruit Preserving Co., 25-A, Muraripukar Road, Calcutta.

41 12. The Farmers Industries, 3-Huzurimul Lane, Entally, Calcutta.

42 13. The Farm & Fruit Products, 15-Pollock Street, Calcutta.

43 14. Ideal Fruit Preserving Factory, 67, Badridas Temple Street, Calcutta.

S. No. *Bengal*—contd.

44 15. Poulain & Co., 5, Commercial Buildings, Calcutta.

45 16. Eastern Condiments Co., 141, Dharamtala Street, Calcutta.

46 17. Rano's Products, 25, Middle Road, Calcutta.

47 18. Sinco's Fruit Products, 89, Dharamtala Street, Calcutta.

48 19. French Cordial & Juice Preserving Factory, P-39, Mission Row Extension, Calcutta.

49 20. India Collective Farms Ltd., 15, Clive Street, Calcutta.

50 21. Mida & Co., 33, Canning Street, Calcutta.

51 22. Mitter Sircar & Co., 68/Serpentine Lane, Calcutta.

52 23. Himalayan Food Products, Kalimpong.

U. P.—

53 1. G. G. Fruit Preserving Factory, Agra.

54 2. Alma Industries, Bareilly (U. P.).

55 3. B. Dugson Fruit Preserving Co., Bareilly.

56 4. Kanhiya Lal & Bros., Rawatpara, Agra.

57 5. Bharat Canning Co., Hewatpara, Agra (U. P.).

Delhi—

58 1. Delhi Food Products Ltd., 4, Keeling Road, New Delhi.

59 2. Northland Industries, Chuna Mandi, Pahar Ganj, Aziz Buildings, New Delhi.

60 3. Nirula & Co., Connaught Place, New Delhi.

61 4. Harnarain Gopinath, Khari Baoli, Delhi.

62 5. Hindustan Canning Industries, behind Imperial Bank, Chandni Chowk, Delhi.

63 6. Bi-Vit Food Laboratories, Mori Gate, New Delhi.

64 7. Himalayan Fruit Industries Ltd., Khari Baoli, Delhi.

65 8. Harnarain Gokalchand, Khari Baoli, Delhi.

66 9. The Civil and Military Stores, Tiss Hazari, Delhi.

67 10. Victoria Manufacturing Co., 17, Harphul Singh Building, Subzimandi, Delhi.

68 11. Castle Canning Co., Delhi.

69 12. Baluchistan Fruit Products, 56, Babar Road, New Delhi.

S. No.		*Punjab*—
70	1.	Preservation Syndicate, Grant Trunk Road, Amritsar.
71	2.	Garden Products (India), Ltd., Gojra, District Lyallpur.
72	3.	Tenison Fruit Farms, Sargodha (Pb.).
73	4.	The Glacier Products (India) Ltd., Pathankot.
74	5.	Indian Mildura Fruit Farms Ltd., Renala Khurd, District, Montgomery.
75	6.	Indian Pure Food Products, Gojra, District Lyallpur.
76	7.	Pure Food Products Laboratories, F-282, Kakezian Street, Lahore.
77	8.	S. A. Rehman & Sons, Grant Trunk Road, Lahore.
78	9.	The Ravi Food Products, Montgomery.
79	10.	Sunlight Food Industries Ltd., Opp. S. P. S. K. Hall, Lahore.
80	11.	Kuldip Fruit Preserving Co., Ltd., Kuldip Nagar, Ambala Cantt.
81	12.	The Floral Fruit Products, Grant Trunk Road, Ambalal Cantt.
82	13.	The Star Fruit Preserving Co., 7, Nicholson Road, Lahore.
83	14.	King Fruit Packing Co., Montgomery.
84	15.	Sun Beam Food Products Co., G. T. Road, Amritsar.
85	16.	The Punjab Fruit Products Co., Maya Niwas, Khalsa College Road, Gujranwala.
86	17.	The Rainbow Food Products Co., Dhobi Ghat, Lyallpur.
87	18.	Aziz Fruit Products, Montgomery.
88	19.	The Master Juice Co., Mission Buildings, Civil Lines, Amritsar.
89	20.	Pal's Fruit Products, Amritsar.
90	21.	The Colony Products, Aminpur Bazar, Lyallpur.
91	22.	Punjab Fruit Products, 15-Maclagon Road, Lahore.
92	23.	Noon Farm Products Ltd., Bhalwal, District Shahpur.
93	24.	Sham Singh Inder Singh, Lakar Mandi, Dhab Wastiram, Amritsar.
94	25.	N. C. Food Industries, Nirmal Niwas, Krishna Kunj, Lahore.
95	26.	Sarin Food Products, Okara District, Montgomery.
96	27.	Standards Drugs Co., T. T. R., Amritsar.
97	28.	Victory Pure Food Products, Gojra, District Lyallpur.
98	29.	The Central Food Products Co., G. T. Road, Amritsar.

S. No.

N. W. F. P.—

99 1. The United Finance Ltd., Rawalpindi.

100 2. The Metro Fruit Products, Krishnapura, Rawalpindi.

101 3. The Friends' Trading Co., Bohar Bazar, Rawalpindi.

102 4. Halma Sesame & Co., N/313, Bhabhran Bazar, Rawalpindi.

103 5. Segan Fruit Products Co., Mohla Kartarpura, Rawalpindi.

104 6. India Fruit Co., N.-W. F. P, Sardar Road, Peshawar.

105 7. Government Canning Factory, Peshawar.

Baluchistan—

106 1. Veldon Chemical & Food Products, Daldeva Road, Quetta.

107 2. Hamid Fruit Farms, Gulistan (Baluchistan).

108 3. Dittu & Sons, Surajgunj Bazar, Quetta.

109 4. Davids Jam Manufacturing Factory, P. O. Box No. 44, Quetta.

Sirmur State—

110 1. Sirmur Land Produce Syndicate, Nahan.

Patiala—

111 1. Teg Products, Bahadurgarh Farms, Patiala.

Jammu and Kashmir State—

112 1. Jammu and Kashmir Industries Ltd., Jammu (Tawi).

113 2. Kashmir Canning Industries Ltd., College Road, Jammu (Tawi).

114 3. Ravenscroft Limited, Raj bagh, Srinagar (Kashmir).

Ajmer—

115 1. Bhikkilal Chottaylal Agarwal, Madar Gate, Ajmer.

Hyderabad Deccan—

116 1. The National Food Products Ltd., Nazamshahi Road, Hyderabad Deccan.

APPENDIX IV

List of Consumers to whom Questionnaires were issued

1. The Taj Mahal Hotel, Bombay.
2. Grant Hotel, Bombay.
3. Majestic Hotel, Bombay.
4. Purohit Hotel, Bombay.
5. Rodriques & Co., Karachi.
6. Tarachand Moolchand, Karachi.
7. Co-operative Stores, Karachi.
8. Monginis Limited, Bombay.
9. Aram Restaurant, Bombay.

APPENDIX V

List of Importers to whom Questionnaires we

1. Herbertson Ltd., Bombay.
2. K. M. Saboowala, Bombay.
3. Yazdani & Co., Ltd., Bombay.
4. Empire Stores, Bombay.
5. Great Eastern Stores, Calcutta.
6. Army & Navy Stores, Calcutta.
7. Mazda Ltd., Calcutta.
8. V. P. Stores, Calcutta.
9. O. N. Mukerji & Sons, Calcutta.
10. Spencer & Co., Ltd., Calcutta.
11. Daw Sen & Co., Calcutta.
12. A. Firpo & Co., Ltd., Calcutta.
13. B. N. R. Co., Kidderpore, Calcutta.
14. Bombay Provision Merchants' Association, B

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APPENDIX VI

List of Factories visited by or on behalf of the Board

1. Sree Kissen Dutt & Co., Calcutta.	Visited by Dr. H. L. Dey, on the 8th August 1946.
2. Madhu Canning Factory, Bombay.	Visited by Dr. V. V. Kelkar, Technical Adviser, and Mr. O. N. Anand, Cost Accounts Officer, on the 3rd, 12th and 13th September 1946.
3. Indian Mildura Fruit Farm, Renala Khurd, Montgomery.	(i) Visited by Mr. C. C. Desai, Dr. Nazir Ahmad, Dr. H. L. Dey and Sardar Bahadur Lal Singh, on the 10th October 1946.
	(ii) Visited by Dr. V. V. Kelkar, Technical Adviser and Mr. O. N. Anand, Cost Accounts Officer, from the 17th September 1946 to the 22nd September 1946.
4. Ravenscroft Ltd., Srinagar ..	Visited by the President, Mr. C. C. Desai, Dr. Nazir Ahmad, Dr. H. L. Dey and Sardar Bahadur Lal Singh, on the 28th September 1946.
5. Shalimar Canning Works, Srinagar.	Visited by Mr. O. N. Anand, Cost Accounts Officer, from the 28th September to the 2nd October 1946.
6. Jammu & Kashmir Industries, Jammu.	Visited by Mr. C. C. Desai and Dr. H. L. Dey, on the 7th October 1946.

APPENDIX VII

List of Witnesses examined at Srinagar on the 3rd October 1946

Fruit Growers :—

1. Fruit Growers' Association, Srinagar, represented by Khan Ghulam Hussein Khan, President, and Pandit Shambu Nath, Secretary of the Association.

Fruit Canners :—

1. Shalimar Canning Works, Srinagar, represented by Mr. P. N. Kak.
2. Ravenscroft Ltd., Srinagar, represented by Mr. Chopra and Mr. Sahgal.
3. H. A. Rahim & Co., Srinagar, represented by Mr. Ghulam Qadir.
4. Happy Valley, Baramula, represented by Mr. Pran Nath.

The Development Minister, the Director of Agriculture, the Assistant Director of Industries, and the Superintendent of Industries, Jammu and Kashmir Government, who were specially invited, were kindly present to assist the Board in the inquiry.

APPENDIX VIII

List of witnesses examined at Lahore on 11th and 12th October 1946

Producers :—

Madhu Canning Co. Ltd., Bombay, represented by Mr. Kashalkar.

Ravenscroft Ltd., Srinagar, represented by Mr. A. C. Chopra.

Indian Mildura Fruit Farm, Renala-Khurd, represented by Mr. R. Mitchell and Mr. Harris.

G. G. Fruit Preserving Factory, Agra, represented by Mr. M. K. Tikkoo.

The Indian Fruit Co., Peshawar, represented by Mr. Kuli Khan.

S.A. Rehman & Co., Lahore, represented by Mr. Abdul Qadir and Abdul Shakoor.

Kuldip Fruit Preservation Factory Ltd., Kuldipnagar, represented by Mr. I. N. Sudan.

Glacier Products, Pathankot, represented by Mr. M. K. Mahajan.

Castle Canning Co., Delhi, represented by Mr. E. M. Abbassi.

King Chemical Works, Lahore, represented by Mr. Mohd. Jaffar Khan.

Messrs. Hiralal Pannalal, Lahore, represented by Mr. Madanlal.

Australian Dawakhana Ltd., Lahore, represented by Mr. M. A. Bux.

Jammu & Kashmir Industries Ltd., Jammu, represented by Mr. D. D. Chopra.

Indian Fruit Products Co., Lahore, represented by Mr. Shamlal and Mr. Chiranjit Lal.

Shafiq Fruit Products Factory, Jullunder City, represented by Mr. Hakim Mohd. Shafi Qureshi.

Messrs. Govindram Kanchand, Lahore, represented by Mr. Kharaiti Lall and Mr. Sain Lall.

Punjab Fruit Products Co., Gujranwala, represented by Mr. R. M. Varma.

The All-India Food Preservers' Association, Delhi, represented by Mr. Kashalkar and Mr. R. Mitchell, Vice-Presidents.

Indian Processed Food Manufacturers' Association, Calcutta, represented by Mr. K. U. Patel.

Importers and Consumers :—

Spencer & Co. Ltd., Calcutta, represented by Mr. Z. R. Irani.

Others (*Technical Experts, suppliers of packing materials, etc.*) :—

Dr. Girdharilal, Bio-chemist, Indian Institute of Fruit Technology, Lyallpur (Technical Expert).

Indian Sugar Mills Association, Calcutta, represented by Mr. Bafna.

Tinplate Co. of India, Ltd., Calcutta, represented by C. W. Watson.

Metal Box Co. of India, Ltd., Calcutta, represented by Mr. R. W. Westbrook and Mr. Mani.

Sheet Metal Holloware Co., Lahore, represented by Mr. S. Mukherji.

APPENDIX IX

Statement showing the quantity, value and average value per cwt. of Imports of Canned or Bottled Fruits into India from 1936-37 to 1945-46

—		1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45	1945-46†
I. Quantity of Imports from :—											
1. U.K.	Cwt. (000) ..	2·48	2·99	2·26	1·67	0·85	0·4	0·41	..	Information not available.	
2. Straits Settlements ..	,, ..	22·55	20·08	21·99	18·00	17·81	32·4	0·01	..	,,	,,
3. Federated Malay States ..	,, ..	..	0·19	0·40	1·61	0·32	0·5	..	..	,,	,,
4. Canada	,, ..	0·69	0·10	0·12	0·05	0·46	1·00	0·77	..	,,	,,
5. Australia	,, ..	3·13	3·82	3·79	4·67	6·98	18·09	4·26	0·21	,,	,,
6. Italy	,, ..	0·29	0·67	0·63	0·67	0·09	..	..	..	,,	,,
7. Japan	,, ..	0·61	0·24	0·42	0·16	0·10	0·02	..	..	,,	,,
8. U.S.A.	,, ..	13·32	18·02	13·87	12·28	3·40	0·03	0·21	0·26	,,	,,
9. Argentine Republic ..	,, ..	..	..	..	..	..	..	0·23	0·96	,,	,,
10. Other Countries ..	,, ..	1·59	0·52	0·36	1·02	0·78	0·57	0·85	0·01	,,	,,
Total imports ..	,,	35·87*	46·63	43·88	40·13	30·79	43·99	6·74	1·44	3·69	3·72

*Excluding imports into Burma.
†For nine months only, from April to December 1945.

Statement showing the quantity, value and average value per cwt. of Imports of Canned or Bottled Fruits into India from 1936-37 to 1945-46—contd.

—		1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45	1945-46†
II. Value of Imports from :—											
1. U.K.	Rs. (Lakhs) ..	1·36	1·65	1·40	1·13	0·72	0·31	0·20	..	Information not available.	
2. Straits Settlements ..	,, ..	2·35	1·98	2·05	2·09	2·83	3·85	..	..	,,	,,
3. Federated Malay States ..	,, ..	..	0·02	0·03	0·16	0·05	0·10	..	..	,,	,,
4. Canada	,, ..	0·04	0·04	0·04	0·01	0·16	0·65	0·36	..	,,	,,
5. Australia	,, ..	0·92	1·12	1·12	1·27	2·41	6·60	1·44	0·12	,,	,,
6. Italy	,, ..	0·11	0·24	0·25	0·27	0·07	..	..	..	,,	,,
7. Japan	,, ..	0·10	0·05	0·07	0·06	0·03	0·01	..	..	,,	,,
8. U.S.A.	,, ..	4·73	6·74	4·92	5·05	1·54	0·01	0·13	0·10	,,	,,
9. Argentine Republic ..	,, ..	..	..	..	..	..	..	0·17	1·00	,,	,,
10. Other countries ..	,, ..	0·55	0·28	0·21	0·36	0·23	0·27	0·63	0·01	,,	,,
Total imports ..	,, ...	8·34*	12·12	10·09	10·40	8·04	11·80	2·93	1·23	1·74	1·68

*Excluding imports into Burma.
†For nine months only, from April to December 1945.

Statement showing the quantity, value and average value per cwt. of Imports of Canned or Bottled Fruits into India from 1936-37 to 1945-46—contd.

——	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45	1945-46*
III. Average value per cwt. of Imports from :—	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.
1. U.K.	55 0	55 1	61 15	67 14	82 3	69 1	50 5	57 12	Information available.	not
2. Straits Settlements ..	10 7	9 14	9 5	11 9	15 15	17 3	25 13	..	,,	,,
3. Federated Malay States ..	..	9 0	8 6	10 2	16 9	18 10	..	..	,,	,,
4. Canada	42 8	33 11	33 4	29 11	34 5	48 7	47 6	..	,,	,,
5. Australia	29 7	29 4	29 8	27 4	34 9	35 8	33 12	55 13	,,	,,
6. Italy	38 0	36 9	40 1	40 12	77 3	..	..	..	,,	,,
7. Japan	16 1	22 6	17 8	36 15	29 2	37 14	..	..	,,	,,
8. U.S.A.	35 8	37 6	35 8	41 2	45 3	50 14	60 1	39 9	,,	,,
Total imports ..	23 4	26 0	23 0	25 15	26 2	26 13	43 9	85 6	47 5	45 3

*For nine months only, from April to December 1945.

APPENDIX IX—*contd.*

Statement showing the quantity and value of Jams and Jellies Imported into India from 1936-37 to 1945-46

—		1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45	1945-46†
Quantity of Imports from :—											
(1) U. K.	Cwt. (000) ..	14·81	12·10	11·85	10·75	7·09	1·82	0·20	0·12	Information available.	not
(2) Union of South Africa ..	,, ..	..	..	..	0·02	0·09	1·83	3·56	6·62	,,	,,
(3) Commonwealth of Australia.	,, ..	4·91	5·57	5·05	9·61	6·56	16·23	1·80	4·17	,,	,,
(4) Argentine Republic ..	,, ..	..	..	..	..	..	..	0·05	0·70	,,	,,
(5) Other countries ..	,, ..	0·80	0·89	1·33	1·30						
Total imports ..	,, ..	18·51*	18·56	18·23	21·68	0·24	0·40	0·02	0·42	,,	,,
						13·98	20·28	5·63	12·03	17·41	4·40
Value of Imports from :—											
(1) U.K.	Rs. (Lakhs) .	5·39	4·48	4·60	4·15	3·49	1·09	0·16	0·05	Information available.	not
(2) Union of South Africa ..	,, ..	..	..	..	0·02	0·03	0·68	1·45	3·56	,,	,,
(3) Commonwealth of Australia.	,, ..	1·65	1·79	1·58	2·82	2·36	0·06	0·77	1·61	,,	,,
(4) Argentine Republic ..	,, ..	..	..	..	..	..	..	0·05	0·82	,,	,,
(5) Other countries ..	,, ..	0·28	0·38	0·49	0·64	0·12	0·25	0·01	0·24	,,	,,
Total imports ..	,, ..	6·56*	6·65	6·67	7·63	6·00	8·08	2·44	6·28	7·05	2·06

*Excluding imports into Burma.

†For nine months only from April to December 1945.

(c) *Jams* (*Australian*)—

			December 1945
F.o.b. price of 10,527 (24 oz. cans) at Sh. 10 per dozen.	.. ..	£.	5,263 10 0
Freight	.. ..	,,	762 10
Insurance			04 2 6
			9 18 4
(Less excl Sterli			5 6 8
	Sterling .	£.	4,934 11 8
Exchange at Sh. 1/5·7/8	.. ..	Rs.	66,254 9 0
Import duty at 30%	.. ..	,,	19,876 6 0
Clearing Charges	.. ..	,,	2,631 12 0
	Total ..	Rs.	88,762 11 0

The latest quotation of I.X.L. Jam is 10 Sh. 9 *d*. per doz. f.o.b. Australia, that is, an increase of 7·5% over the quotation of December 1945 given above.

(*d*) *Fruit Juices, Cordials etc.*—

F.O.R. price per dozen in Australian currency—October 1946 (*vide* telegram from Indian Trade Commissioner, Australia, to Fruit Development Adviser).

Fruit Juice and Cordials (glass jare) from 21 Sh. to 27 Sh. 6 *d*.

APPENDICES.